Request for Proposals
VoIP E911 System
Alamosa Regional Communications Center
Alamosa, Colorado
Friday, March 27th, 2009
Proposal close date has been extended

Alamosa Regional Communication Center is seeking Proposals from qualified vendors to furnish and install equipment, accessories, hardware, software, labor, training, and materials for a turnkey VoIP E-911 system. The proposed system will be installed in the Public Safety Answering Point in Alamosa, Colorado.

Proposals shall be submitted to Pam Stewart, Regional Communications Manager, no later than 5:00 p.m., April 24th, 2009. Proposals should be submitted to 1205 West Avenue, Alamosa, Colorado 81101. Any questions regarding this RFP shall be submitted in writing to Pam Stewart at pamela.stewart@cdps.state.co.us no later than 5:00pm, April 17th, 2009. Any questions received after this time will not be reviewed or answered.

Alamosa Regional Communication Center reserves the right to reject any and all proposals received.

Pam Stewart, Regional Communications Manager

General Information

1. Introduction

1.1. Alamosa Regional Communication Center, (hereinafter referred to as the Customer) is soliciting sealed proposals from qualified Vendors to furnish and install equipment, accessories, hardware, software, labor, training, and materials necessary for a turnkey VoIP E-9-1-1 system. The proposed system will be installed in the Public Safety Answering Point in Alamosa, Colorado.

1.2. This solicitation is for the purchase of information technology goods and services. The proposals received shall remain confidential until the contract is awarded; therefore there will not be a public bid opening. The contract shall be awarded to the company that submits the best overall proposal.

1.3. Proposals shall be submitted to Pam Stewart, Regional Communications Manager, no later than 5:00 p.m., April 10th, 2009. Proposals should be submitted to 1205 West Avenue, Alamosa, Colorado 81101. Any questions regarding this RFP should be directed in writing to Pam Stewart at   pamela.stewart@cdps.state.co.us   no later than 5:00pm, April 3rd, 2009. Any questions received after this time will not be reviewed or answered.

1.4. All items will be shipped FOB to Alamosa Regional Communication Center, 1205 West Avenue, Alamosa, Colorado 81101.

1.5. Payment will be made Thirty days (30) net after acceptance of the equipment. There will be no advance payments, partial or pre-payments of any kind.

1.6. Colorado and local tax should not be included in the proposal; tax will be paid from the invoice.

1.7. All exceptions must be clearly indicated.

1.8. Insurance Requirements.

    1.8.1. The vendor and all subcontractors, at their own expense, shall provide and maintain insurance with a company licensed to do business in Colorado.

1.8.2. The contractor and all subcontractors in connection with the mentioned insurance in this section shall furnish to the owner duly executed forms showing proof of insurance naming contractor and all subcontractors as additionally insured and that insurance is in full force prior to commencement of the contract.

1.8.3. Comprehensive automobile liability including non-ownership and hired car coverage as well as owned vehicles:
    1.8.3.1.   Bodily injury each person $1,000,000
    1.8.3.2.   Each occurrence $1,000,000

1.8.4. Workman's Compensation as required by all federal, state, maritime or other laws including employer's liability with a limit of at least $500,000.

1.8.5. Comprehensive general liability including contractors liability, contingent liability, contractual liability, completed operation and product liability all on the occurrence basis with personal injury coverage:
    1.8.5.1.   Personal injury each person $1,000,000
    1.8.5.2.   Each occurrence $1,000,000
    1.8.5.3.   Property damage $1,000,000
    1.8.5.4.   Umbrella liability limit of liability $1,000,000

1.9. All components of the Vendor's system shall meet the requirements of FCC Rules and Regulations Part 6B (Registration) and Part 15 (Emanation and Interference). The Vendor shall provide in the bid response all license, permits and registration numbers obtained in their compliance with these Rules and Regulations. All components of the Vendor's system shall meet all current NENA and APCO standards.

1.10. The Vendor shall provide a list of at least four (4) installed systems with the type proposed including three (3) with a minimum, company name, contact person, telephone number and cutover date

1.11. The following points provide the bidder information necessary to develop a perspective for preparing a bid to meet the Enhanced 9-1-1 telecommunications needs as specified herein.

    1.11.1. The project consists of providing equipment to accommodate one Primary PSAP for the Alamosa Regional Communication Center of Alamosa, Colorado.

    1.11.2. The Vendor shall include telephone equipment as required with the system.

1.11.3. The Vendor shall include ANI/ALI equipment as required with the system.

1.11.4. The Vendor shall include other hardware as required with the system.

1.11.5. The Vendor shall ensure on all items of the response that no single component will create a single point of failure for the system.

1.11.6. The Vendor shall provide a turnkey system with full redundancy capable of allowing for components to be located geographically at two different locations, and act as backup for each other and replicating any and all data between the two sites.

1.11.7. The Vendor shall provide a Project Management Team for program planning, direction, structure and controls in order to provide superior service and to ensure all contract requirements and specifications are strictly adhered to.

Mandatory Requirements

2 Mandatory System Requirements

2.1 Taking exception to any of the mandatory requirements listed in the following sections may disqualify the bid response. No further evaluation of the response will be made.

2.2 Mandatory items are as follows:

2.2.1 A trained and certified primary technician for support of the system being proposed in this RFP by Vendor must have permanent residency in the serving area of the Alamosa Regional Communication Center, and agree to maintain that residency requirement for five (5) years. Certification (or timely plan for certification) and residency must be provided as part of this response. In addition, Vendor must have trained personnel that can serve in a backup position to the primary technician that also reside in the serving area of the Alamosa Regional Communication Center. Contractual penalties will apply associated with this requirement during the five year term. Does Vendor agree to this requirement?

2.2.2 Payment will be made Thirty days (30) net after installation and acceptance of the equipment. There will be no advance payments, partial or pre-payments of any kind. Does Vendor agree to this requirement?

2.2.3 The system programming must include automatic diagnostic routines and the automatic notification of any system errors to both the normal system maintenance staff as well as identified Customer staff.

2.2.4 Ability to modify ALI is mandatory.

2.2.5 System stability is critical. All alarming must be immediate and not cyclical or generated in a "ping" scenario locally.

2.2.6 System must not allow for any local configuration of processes which could potentially effect security or potentially breach system.

2.2.7 System data must not be centrally stored and able to reside on multiple servers or at separate locations; no centralized

server is acceptable due to survivability and risk mitigation needs.

2.2.8 The system must be stored program control.

2.2.9 The system programming must include automatic diagnostic routines and the automatic notification of any system errors to both the normal system maintenance staff as well as identified Customer staff.

2.2.10 The system must provide call-handling capabilities to support or exceed the traffic requirements specified herein.

2.2.11 The system must be compatible with industry standard telephones and compatible with Voice Recording (Call Logger).

2.2.12 The system shall permit programmable feature assignments.

2.2.13 The system provided shall be in accordance with all NENA standards and APCO standards.

2.2.14 System must support multiple layers of redundant call processing and more than one level of survivability.

2.2.15 The system shall have a complete portable solution for Command Post Operations provided a nominal broadband access is achievable between the main PSAP and the Command Post.

2.2.16 The system must have programmable ACD capabilities included, not as an additional cost.

2.2.17 The design must integrate with the current Cisco, Nortel, and/or Avaya IP Phone systems.

2.2.18 System must support multiple layers of redundant call processing and more than one level of survivability.

2.2.19 Connectivity for one remote site to the primary PSAP location, both of which will be within Alamosa, Colorado, is required for all voice and data due to network vision and efficiency requirements. This connectivity must be included as part of this proposal, and it is Customer's desire to not incur any ongoing and/or recurring monthly charges over the five (5) year term for this connectivity.

2.2.20 Full disaster recovery solution, via a remote provision, must be available to the PSAP.

2.2.21 The system must be designed so that no calls in progress will be dropped or lost due to failure of the telephony servers. Conference servers are not an acceptable substitution.

2.2.22 The central communications platform shall have the capability to provide a digital T1 interface (DS1 standard) for 9-1-1 trunks, central office lines, and ringdown lines. This capability must be a direct connect T1 without the requirement for separate analog channel bank equipment. All relevant features, including Feature Group D, shall be supported.

2.2.23 Proposed system must process messages internally with a native SIP design, that is it must send and receive real-time sessions internally as a SIP Proxy.

2.2.24 Proposed system must work with any connected FXO/FXS gateway from any vendor and allows for flexible rules based call routing using different gateways in different locations, including automated fail-over in case a gateway is temporarily unavailable.

2.2.25 Proposed system must be SIP standards compliant.

2.2.26 Proposed system must provide a web interface for system administration and configuration, this interface shall allow for remote as well as local configuration access.

2.2.27 Proposed system must provide the following telephony interfaces, state your ability to provide each.
   a. CAMA (FXS, T1)
   b. Loop Start (FXO, T1)
   c. PRI (T1)
   d. Ground Start (FXO, FXS, T1)
   e. BRI
   f. Q.SIG interface for PBX interconnect to other PBX's such as Avaya etc.

2.3 Component Redundancy

Any component proposed in the system should be fully redundant allowing for full geographical split location of the system. The system shall be designed to allow for locating a fully redundant system at a geographically different location but still allowing the system to communicate between the two sites allowing for full data replication and utilization of all components as if the system where in one location. The system should be able to split the load of incoming outside lines so as to have redundancy of separation should one site become disabled. Reduction in service is not acceptable.

General Requirements

3. General Equipment Requirements

3.1 The Customer requests the Vendor to submit a bid to furnish and install a VoIP Enhanced 9-1-1 system. The System shall be software controlled and feature programmable.

3.2 When a 9-1-1 call is received, the ANI controller shall accept multi-frequency codes extended from the Central office and decode the calling telephone number and display it on the screen associated with the answering Call Taker's Position.

3.3 Immediately thereafter the ANI Controller shall automatically extend the calling number data to the ALI computer. Then, the ALI information shall display the caller's address with the ANI.

3.4 Call Takers shall answer each 9-1-1 call. Certain calls may be transferred as required.

3.5 The system shall be equipped with eight answer positions which shall be cross connected to the telephone company's E9-1-1 trunk lines. The system should have the capability to expand to twelve positions for future growth.

3.6 The system shall be equipped to run self-diagnostic programs and to automatically report any error to the Customer via local printer and electronically via email, pager or cell phone texting.

3.7 All data must be capable of being displayed on 19' LCD touch screen monitors.

3.8 VoIP Enhanced 9-1-1 System

The System Architecture shall be such that the failure of any one component or module will not result in total system failure, but only the loss of the equipment associated with that module. All vital system modules must be protected through the use of redundant modules to ensure single point failure tolerance. It is mandatory that any central processor shall be fully duplicated in a hot standby mode. Switch-over shall be automatic and shall not require manual intervention.

The System shall be engineered to provide system-wide reliability of 99.999% survivable. The Bidder shall describe their system architecture with respect to the major components or modules, and describe how the system will react to a failure of each major component or module.

The proposed system shall have the demonstrated ability to effectively manage and process a variety of different call formats including:

- Traditional analog or digital telephone calls
- Wireless calls in compliance with the FCC Phase I and Phase II mandate for full call integration
- Voice Over IP in native (SIP) format in compliance with the emerging NENA I2 Standard

The following incoming telephony interfaces shall be supported:

- Telephone Line Interface
- Ring Down Line Interface
- E9-1-1 CAMA Analog Trunk
- Digital T1 Interface
- ISDN Primary Rate Interface
- Enhanced MF Signaling Interface
- Direct IP Telephony Interconnection

The Central Communications Platform shall provide two output interfaces to the ALI Retrieval system and have an auto ALI re-bid capability.

The Central Communications Platform must be capable of providing intelligent call distribution of 9-1-1 trunks and administrative lines. The Automatic Call Distribution (ACD) must allow for various routing options including as a minimum:

- The capability to route the call that has been waiting the longest to the first available operator
- The capability to ring all answering positions
- Linear
- Circular
- Multiple Queues
- Refuse Call
- Control DND
- Overflow

The Central Communications Platform shall provide connectivity to operate distributed PSAP environments across geographically separated sites. This shall include the ability to support a multiple deployment option including the capability to operate a back up site with automatic switchover.

The Central Communications Platform shall enable call-takers to perform one-button callback for Wireline 9-1-1 calls, Wireless 9-1-1 calls, and VoIP calls.

The system shall be capable of providing portable operator answering positions using a high speed IP connection or IP switched connection to remotely access the Central Communications Platform. These must be on laptop or ruggedized computers that are totally self-contained.

The system shall provide the ability to display ALI information to the call-taker before the call is answered.

The system shall allow supervisors and/or call-takers to view, in real time, concise ALI information of all 9-1-1 calls in queue at the PSAP.

Maintenance and administration shall be a web-browser application that provides the maintenance functions required for the 9-1-1 specific functions.

The system shall be equipped with a monitoring capability that can be located with the Central Communications equipment or in a remote location.

Vender will quote price for basic spare parts to be stored and kept at the PSAP site.

3.9 Reporting and Statistics

The Bidder shall provide a comprehensive management and statistical reporting functionality to provide the PSAP management personnel with real-time and historical information. It shall be user friendly, customizable and capable of generating reports for varying time periods. The system also shall be able to auto-schedule the generation of predefined reports. As a minimum, 911 and Administrative Call Detail Reports (for record keeping and legal requirements) shall be readily available. These shall include (at a minimum):

- ANI, seizure time, position answered, answer time, disconnect time, and incoming trunk number
- Total count of Wireline and Wireless calls
- Average Call Waiting Report
- Average call duration
- Total abandoned calls
- Calls by hour of day
- Calls answered by position
- Calls answered by all positions
- Calls answered by User ID
- Average call duration on administrative lines
- Details on conferences and transfers

3.10   Paperless Operation

3.12.1 All Maintenance Logs, Statistics, CDR, ALI Information, and TDD conversations should have the ability to be saved in electronic format. The data generated from these reports shall be exportable to the "off the shelf" database or reporting software. These files should also be backed up to a removable medium such as floppy disk or CD for secure storage.

3.11   System Processors

3.12.1 The system shall have sufficient capability and capacity to provide full system operation for current and future needs of the Customer's access lines at all times, including stand-alone operation without delays in displaying, transferring or ringing. The system server shall have sufficient memory, RAM, and a processor to accomplish the needs of the system now and in the future.

3.12   Software Updates

3.12.1 The Vendor must provide – at no cost to Customer – all software releases designed to enhance the system and to keep the system state-of-the-art for a period of not less than one (1) year after acceptance. Enhancements requiring hardware may be billable. The Vendor must describe the software release and support offered by the manufacturer, as well as the availability and cost related to subsequent or special software releases. The Vendor must provide any specific constraints, terms, or conditions in detail.

3.13   The Vendor must provide a description of software enhancements planned for the future and the expected release dates.

3.14   All software updates or enhancements must be accomplished without taking the system out of service.

3.15   Automatic TDD Answering System shall be provided system-wide that is utilized by each call-taking position.

3.16   System Block Diagram

The Vendor shall provide a detailed description and block diagram of the system to be provided with proposal, including a discussion of the system's architecture and its ability to provide service required by the Customer.

3.17   Net Clock for all clocks in system is required.

3.18   System Objectives

The objectives of the Enhanced 9-1-1 telecommunications system for the Vendor are as follows:

A. Provide an answering point for all emergency 9-1-1 calls with Automatic Location Identification (ALI).
B. Provide manual input of telephone numbers in case of ANI failure in   order to receive Automatic Location Identification (ALI) display.
C. Provide the fastest possible transfer of emergency calls to other agencies to be determined at the time of installation. Star Codes to transfer ANI/ALI information on wireless calls.

3.19   Employee Training

The Vendor shall provide employee training for all Call Takers and Administrative Staff. Training should be detailed in the proposal. Details should include a full training curriculum and the level of proficiency expected.

3.20   Trouble Reporting

The Vendor shall provide along with their response a narrative concerning the procedures for reporting trouble including telephone number and email address for first, second and third level supervision and general maintenance overview. The vendor shall include report to resolution data for the company.

3.21 Maintenance

Vendor shall provide maintenance 24 hours per day, seven days per week. Defective components may be replaced by local personnel or per Vendor instructions. A quote on maintenance shall be provided for five (5) years.

3.22 Future Expansion

The system described in these specifications shall be capable of meeting today's needs, as well as future expansion in order to meet anticipated future growth. It shall be capable of supplying the equipped wired and maximum quantities specified in this document without replacing any in-place common equipment. The system should be installed with adequate processor and hardware to meet this growth.

Bidder shall state the expansion capability of their equipment, describing:

- Overall system capacities, including the number of incoming 9-1-1 trunks, the number of answering positions, and the number of telephone lines
- Demonstrate the ability to increase the current number of answering positions. The proposed system shall be capable of being temporarily increased to handle short-term increases in projected call volumes (natural disasters and special events) within 12 hours.
- Demonstrate the ability to establish a mobile command post capability with all E9-1-1 functionality within 12 hours.

4 System Testing Prior to Cutover and Cutover

The Vendor must thoroughly test the entire system prior to conversion.

The Customer requires the Vendor to ring-talk test each trunk to PSAP position at least twice prior to cutover. During the testing of the E-9-1-1 equipment prior to cutover, the Vendor shall log all troubles found and make any necessary repairs or adjustments at their cost. These reports shall be submitted to the Customer showing all errors found and corrective action taken to resolve troubles.

The Vendor must provide, at a minimum, an onsite engineer for the first 24 hours after cutover.

Bid Form
VoIP E911 Phone System
For [ENTITY, CITY, STATE]

Proposal of _____, a corporation
licensed to do business in the State of [STATE NAME] is shown on the following
cost summary sheets.

The complete pricing proposal is provided as Attachment A to this RFP.

Submitted by:

_____
(Signature/Seal of Officer)

Company Name

_____

                                           CORPORATE SEAL

Address

_____
_____
_____

Date

_____